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Report Summary:

<u>hlights</u>	<u>January 1, 2012</u>	<u>January 1, 2014</u>	
Contributions			
Funding Schedule FY 2015	\$3,423,564	\$3,423,564	
Funding Schedule FY 2016	3,547,854	3,525,137	
Funded Ratios			
GAS No. 25	49.8%	53.6%	
<u>Participants</u>			
Actives	256	252	
Retirees and Beneficiaries	207	217	
Inactives	66	63	
Disabled	<u>16</u>	<u>16</u>	
Total	545	548	
<u>Payroll</u>			
Payroll of Active Members	\$13,474,102	\$12,333,598	
Average Payroll	52,633	48,943	
Normal Cost			
Employer	296,188	376,854	
Employee	1,153,566	1,053,952	
Administrative Expenses	<u>120,000</u>	<u>120,000</u>	
Total	1,569,754	1,550,806	
Actuarial Accrued Liabilities			
Actives	38,876,287	36,981,640	
Retirees, Beneficiaries, Disabilities and Inactives	39,126,228	43,881,662	
Total	78,002,515	80,863,302	
Actuarial Value of Assets	38,865,235	43,305,292	
Unfunded Actuarial Accrued Liabilities	\$39,137,280	\$37,558,010	

Introduction

The purpose of this report is to present the findings of an actuarial valuation as of January 1, 2014, of Amesbury Contributory Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2014.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the Amesbury Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2014. The report also includes results under GASB Statements #25, #27, #67 and #68.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The
 cost of these benefits has been assumed by the State under Proposition Two and
 One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last two years, the total unfunded actuarial accrued liability decreased by 4.04% to \$37,558,010. The decrease is the result of net favorable actuarial experience during the preceding years. The sources of change are as follows:

Asset Loss	1,492,572
Salary Increase Gain	(3,921,465)
New Participant Loss	430,758
Active – Retirement Loss	(938,066)
Active – Termination Loss	(42,471)
Active – Mortality Gain	(47,832)
Active – Disability Loss	(298,285)
Inactive - Mortality and Data Adjustment Loss	950,373
Other, including data, contribution interest, etc	(74,203)
Expected decrease	869,350
Total Change	(1,579,269)

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

	Table I	
	<u>January 1, 2012</u>	<u>January 1, 2014</u>
Superannuation	\$960,551	\$951,551
Termination	93,021	87,133
Death	97,896	97,963
Disability	298,286	294,159
Administrative Expenses	<u>120,000</u>	120,000
Total Normal Cost	1,569,754	1,550,806
% of Pay	11.7%	12.6%
Employee Contributions	1,153,566	1,053,952
% of Pay	8.6%	8.5%
Employer Normal Cost	\$416,188	\$496,854
% of Pay	3.1%	4.0%

Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

•	Table II	
	<u>January 1, 2012</u>	January 1, 2014
Actives		
Superannuations	\$34,934,929	\$33,429,366
Termination	424,169	329,885
Death	1,269,199	1,176,220
Disability	2,247,990	2,046,169
Retirees and Inactives		
Retirees and Beneficiaries	33,902,293	38,245,762
Terminated (Refund)	706,734	915,965
Disabled	<u>4,517,201</u>	4,719,935
Total	\$78,002,515	\$80,863,302

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

	Table III	
	<u>January 1, 2012</u>	January 1, 201
Actives		
Superannuation	\$42,805,196	\$41,191,484
Termination	819,159	710,601
Death	2,045,411	1,961,130
Disability	4,925,089	4,767,176
Retirees and Inactives		
Retirees and Beneficiaries	33,902,293	38,245,762
Terminated (Refund)	706,734	915,965
Disabled	<u>4,517,201</u>	4,719,935
Total	\$89,721,083	\$92,512,053

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Ta	ble IV	
	<u>January 1, 2012</u>	<u>January 1, 2014</u>
Cash equivalents	\$1,529,534	\$1,667,236
Short term investments	0	0
Fixed income securities	0	0
Equities	34,386,467	43,871,488
International	0	0
Real Estate	0	0
Venture Capital	0	0
Other	0	0
Accounts receivable	38,144	0
Accounts payable	(437)	0
Accrued income	<u>0</u>	<u>0</u>
Total Market Value	\$35,953,708	\$45,538,724
Total Actuarial Value	\$38,865,235	\$43,305,292

Actuarial Value of Assets

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8.25%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 10%. The calculation of the actuarial value of assets as of January 1, 2014 is presented in Table V.

Table V

		January 1, 2014
(1)	Market value at January 1, 2013	\$40,253,101
(2)	2013 Contributions	\$4,823,657
(3)	2013 Payments	(\$5,379,088)
(4)	Net interest adjustment at 8.25% on (1), (2), and (3) to December 31, 2013	\$3,297,970
(5)	Expected market value on January 1, 2014	\$42,995,640
,	(1) + (2) + (3) + (4)	
(6)	Actual market value on January 1, 2014	\$45,538,724
(7)	2013 (Gain) / Loss	(\$2,543,084)
(8)	80% of 2013 (Gain) / Loss	(\$2,034,467)
(9)	2012 (Gain) / Loss	(\$1,703,406)
(10)	60% of 2012 (Gain) / Loss	(\$1,022,043)
(11)	2011 (Gain) / Loss	\$2,996,934
(12)	40% of 2011 (Gain) / Loss	\$1,198,774
(13)	2010 (Gain) / Loss	(\$1,878,479)
(14)	20% of 2010 (Gain) / Loss	(\$375,696)
(15)	Actuarial value on January 1, 2014, $(6) + (8) + (10) + (12) + (14)$	\$43,305,292
(16)	but not less than 90% nor greater than 110% of (6)	\$43,305,292
(17)	Ratio of actuarial value to market value	95.10%
(18)	Actuarial Value Return for 2012	1.59%
(19)	Actuarial Value Return for 2013	11.14%
(20)	Market Value Return for 2012	13.01%
(21)	Market Value Return for 2013	14.61%

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Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Tab	le VI	
	<u>January 1, 2012</u>	January 1, 2014
Actuarial Accrued Liability	\$78,002,515	\$80,863,302
Actuarial Assets	<u>38,865,235</u>	43,305,292
Unfunded Actuarial Accrued Liability	\$39,137,280	\$37,558,010
Funded Status	49.8%	53.6%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws, and Chapter 188 of the Acts of 2010, An Act Relative to Municipal Relief. These amounts were calculated to comply with the June 30, 2040, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2035 \$35,057,071 over 21 years with 4.0% increasing payments
- Increasing amortization of the 2002 Early Retirement Incentive unfunded liability by June 30, 2020 \$390,595 over 6 years with 4.36% increasing payments
- Increasing amortization of the 2003 Early Retirement Incentive unfunded liability by June 30, 2025 \$2,110,345 over 11 years with 4.5% increasing payments
- Interest adjustment for payments made from July through December The pension appropriation is shown in Table VII.

Table VII		
	January 1, 2012	January 1, 2014
Normal cost	\$416,188	\$496,854
Amortization payment of unfunded accrued liability	2,318,151	2,419,936
Amortization payment of 2002 ERI liability	65,372	71,197
Amortization payment of 2003 ERI liability	208,253	227,417
Total cost	\$3,007,964	\$3,215,404
% of Pay	22.3%	26.1%
Fiscal 2015 cost	\$3,423,564	\$3,423,564
Fiscal 2016 cost	\$3,547,854	\$3,525,137

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.0% per year. The employee contribution rate is expected to increase to 10.5% by 2038 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 21 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents about 27% of payroll, decreasing to 23.2% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of initially 2.4%, decreasing to 2.2% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

Appropriation Forecast

Fiscal			Employer	Amortization	Employer	Employer	
Year		Employee	Normal Cost	Payments	Total Cost	Total Cost	Funded
Ending	<u>Payroll*</u>	Contribution	with Interest	with Interest	with Interest	% of Payroll	Ratio %**
2015	\$12,333,598	\$1,053,952	\$525,518	\$2,898,046	\$3,423,564	27.8	53.6
2016	\$12,826,942	\$1,107,011	\$535,009	\$2,990,128	\$3,525,137	27.5	54.6
2017	\$13,340,020	\$1,162,628	\$544,418	\$3,111,273	\$3,655,691	27.4	56.1
2018	\$13,873,620	\$1,220,924	\$553,725	\$3,237,332	\$3,791,057	27.3	57.7
2019	\$14,428,565	\$1,282,023	\$562,904	\$3,368,506	\$3,931,410	27.2	59.3
2020	\$15,005,708	\$1,346,056	\$571,932	\$3,505,002	\$4,076,934	27.2	60.9
2021	\$15,605,936	\$1,413,161	\$580,782	\$3,549,756	\$4,130,538	26.5	62.6
2022	\$16,230,174	\$1,483,480	\$589,425	\$3,693,312	\$4,282,737	26.4	64.3
2023	\$16,879,381	\$1,557,164	\$597,829	\$3,842,682	\$4,440,511	26.3	66.1
2024	\$17,554,556	\$1,634,369	\$605,963	\$3,998,099	\$4,604,062	26.2	68.0
2025	\$18,256,738	\$1,715,259	\$613,791	\$4,159,810	\$4,773,601	26.1	70.0
2026	\$18,987,007	\$1,800,005	\$621,276	\$3,937,714	\$4,558,990	24.0	72.2
2027	\$19,746,488	\$1,888,787	\$628,378	\$4,095,223	\$4,723,601	23.9	74.1
2028	\$20,536,347	\$1,981,791	\$635,054	\$4,259,032	\$4,894,086	23.8	76.2
2029	\$21,357,801	\$2,079,213	\$641,258	\$4,429,393	\$5,070,651	23.7	78.4
2030	\$22,212,113	\$2,181,258	\$646,943	\$4,606,569	\$5,253,512	23.7	80.8
2031	\$23,100,598	\$2,288,140	\$652,056	\$4,790,832	\$5,442,888	23.6	83.4
2032	\$24,024,622	\$2,400,083	\$656,543	\$4,982,465	\$5,639,008	23.5	86.2
2033	\$24,985,607	\$2,517,320	\$660,346	\$5,181,764	\$5,842,110	23.4	89.3
2034	\$25,985,031	\$2,640,096	\$663,403	\$5,389,034	\$6,052,437	23.3	92.5
2035	\$27,024,432	\$2,768,666	\$665,648	\$5,604,596	\$6,270,244	23.2	96.1
2036	\$28,105,409	\$2,903,298	\$667,011	\$0	\$667,011	2.4	100.0
2037	\$29,229,626	\$3,044,270	\$667,418	\$0	\$667,418	2.3	100.0
2038	\$30,398,811	\$3,191,875	\$666,790	\$0	\$666,790	2.2	100.0
2039	\$31,614,763	\$3,319,550	\$693,462	\$0	\$693,462	2.2	100.0
2040	\$32,879,354	\$3,452,332	\$721,200	\$0	\$721,200	2.2	100.0
2041	\$34,194,528	\$3,590,425	\$750,048	\$0	\$750,048	2.2	100.0
2042	\$35,562,309	\$3,734,042	\$780,050	\$0	\$780,050	2.2	100.0
2043	\$36,984,801	\$3,883,404	\$811,252	\$0	\$811,252	2.2	100.0
2044	\$38,464,193	\$4,038,740	\$843,702	\$0	\$843,702	2.2	100.0
2045	\$40,002,761	\$4,200,290	\$877,450	\$0	\$877,450	2.2	100.0
2046	\$41,602,871	\$4,368,302	\$912,548	\$0	\$912,548	2.2	100.0

^{*} Calendar basis

^{**} Beginning of Fiscal Year

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GASB Statements No. 25, No. 27, No. 67 and No. 68

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to \$0. The required disclosure information is shown in Table VIII.

Table VIII				
		<u>January 1, 2012</u>	January 1, 2014	
(1)	Actuarial Accrued Liability	\$78,002,515	\$80,863,302	
(2)	Actuarial Value of Assets	<u>38,865,235</u>	43,305,292	
(3)	Unfunded Actuarial Accrued Liability	39,137,280	37,558,010	
(4)	Funded Ratio (2)/(1)	49.8%	53.6%	
(5)	Covered Payroll	\$13,474,102	\$12,333,598	
(6)	UAAL as a percentage of payroll: (3)/(5)	290.5%	304.5%	
(7)	Annual Required Contribution (ARC)	\$3,088,758	\$3,423,564	
(8)	Net Pension Obligation	\$0	\$0	

4.0%

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Rate of Salary Increase:

PERAC Annual Statement - GASB #25 and #27 APPENDIX PAGE 3 ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Sherman Actuarial Services as of January 1, 2014.

The normal cost for employees on that date was: \$1,053,952	8.5% of pay
The normal cost for the employer was: 496,854	4.0% of pay
The actuarial liability for active members was:	\$36,981,640
The actuarial liability for retired and inactive members was:	43,881,662
Total actuarial accrued liability:	80,863,302
System assets as of that date:	43,305,292
Unfunded actuarial accrued liability:	\$37,558,010
The ratio of system's assets to total actuarial liability was	53.6%
The principal actuarial assumptions used in the valuation are as follows:	
Investment Return:	8.25%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a percent of Covered Payroll
	(a)	(b)	(b-a)	(a/b)	(c)	(b-a)/c
01/01/14	\$43,305,292	\$80,863,302	\$37,558,010	53.6%	\$12,333,598	304.5%
01/01/12	38,865,235	78,002,515	39,137,280	49.8%	13,474,102	290.5%
01/01/10	35,793,709	69,010,578	33,216,869	51.9%	12,048,107	275.7%
01/01/08	39,214,087	60,053,154	20,839,067	65.3%	11,374,648	183.2%
01/01/06	31,892,926	56,634,407	24,741,481	56.3%	11,652,440	212.3%
01/01/04	27,735,259	47,405,492	19,670,233	59.0%	10,572,920	186.0%
01/01/03	23,420,773	43,172,723	19,751,950	54.0%	10,873,793	182.0%

GASB Statements No. 67 and No. 68

Effective for periods beginning after June 15, 2013, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which amend GASB Statements No. 25 and No. 27, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

The statement requires the system to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the following items as of the end of the plan's reporting period, as applicable:

- Assets
- Deferred outflows of resources (consumption of net assets by the employers that is applicable to a future reporting period)
- Liabilities
- Deferred inflows of resources (acquisition of net assets by the employers that is applicable to a future reporting period)
- Fiduciary net position (Assets + Deferred outflows Liabilities Deferred inflows)

The system is considered a cost-sharing multiple-employer pension plan since pension obligations exist for employees of more than one employer and plan assets can be used to pay the benefits of the employees of any employer.

This report does not include all items required under GASB Statements No. 67 and No. 68. Rather, it provides all items required that are not readily available from other sources such as the Annual Statement of the Financial Condition prepared by the Board, Chapter 32 of the Massachusetts General Laws and investment reports prepared by the plan's investment consultant.

Discount Rate

The discount rate, and all other actuarial assumptions, are the as those described in Exhibit 6. The discount rate was selected based on a projection of employer and employee contributions, benefit payments, expenses and the long term expected rate of return on trust assets. Under Chapter 32 of the Massachusetts Laws, employers are required to make the necessary contributions to the trust such that the plan reaches a full funding status by 2040. In addition, Chapter 32 also gives the Retirement Board the right to go directly to the Assessors of the community and add an additional property tax to bills for amounts not paid by employer.

Based on these laws and assumptions, the pensions plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The Board selected 8.25% as the long term expectation of investment returns. The trust assets are invested in the State of Massachusetts Pension Reserve Investment Trust. The average return for the 29 years ending as of December 31, 2013 was 9.64%. The average return for the past 5 years ending December 31, 2013 was 11.58%.

Assets

The Net Position Restricted for Pensions, shown in page 7, is \$45,538,724. The 2013 Annual Statement of the Financial Condition contains the values for previous years and the changes in Net Position Restricted for Pensions. Investments are reported at fair value.

Net Pension Liability as of December 31, 2013 – GASB Statement No. 67

The following presents the net pension liability of the system calculated using the discount rate of 8.25%, as well as what the system's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.25%) or 1-percentage-point higher (9.25%) than the current rate:

	1% Decrease (7.25%)	Current Discount Rate (8.25%)	1% Increase (9.25%)
Total Pension Liability	\$ 89,304,053	\$ 80,863,302	\$ 73,616,176
Plan Fiduciary Net Position	\$ 45,538,724	<u>\$ 45,538,724</u>	\$ 45,538,724
Net Pension Liability	\$ 43,765,329	\$ 35,324,578	\$ 28,077,452

The Plan Fiduciary Net Position as a percentage of the Total Pension Liability is 56.32%.

Net Pension Liability as of June 30, 2014 – GASB Statement No. 68

The following presents the net pension liability of the system calculated using the discount rate of 8.25%, as well as what the system's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.25%) or 1-percentage-point higher (9.25%) than the current rate:

	1% Decrease (7.25%)	Current Discount Rate (8.25%)	1% Increase (9.25%)
Total Pension Liability	\$ 90,488,318	\$ 81,935,633	\$ 74,592,403
Plan Fiduciary Net Position*	\$ 46,731,298	\$ 46,731,298	\$ 46,731,298
Net Pension Liability	\$ 43,757,020	\$ 35,204,335	\$ 27,861,105

^{*}Estimated

The Plan Fiduciary Net Position as a percentage of the Total Pension Liability is 57.03%.

Schedules of Required Supplementary Information

	<u>2013</u>
Total Pension Liability – Beginning	n/a
Total Pension Liability – Ending (a)	\$ 80,863,302
Plan Fiduciary Net Position – Beginning	n/a
Plan Fiduciary Net Position – Ending (b)	\$ 45,538,724
Net Pension Liability – Ending (a) – (b)	\$ 35,324,578
Plan Fiduciary Net Positions as a percentage	
of the Total Pension Liability	56.32%
Covered-employee payroll	\$ 12,333,598
Net Pension Liability as a percentage of	
Covered-employee Payroll	286.4%

EXHIBITS

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Age/Service Distribution with Salary as of January 1, 2014

Attained Age	Average Salary <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	1 9,183	0	0 0	0 0	0 0	0 0	0	0	0	1 9,183
20-24	8 39,593	0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	8 39,593
25-29	18	4	0	0	0	0	0	0	0	22
	40,736	38,085	0	0	0	0	0	0	0	40,254
30-34	7	7	3	0	0	0	0	0	0	17
	40,535	49,599	59,932	0	0	0	0	0	0	47,691
35-39	3	3	2	1	0	0	0	0	0	9
	25,299	49,568	65,183	56,012	0	0	0	0	0	45,664
40-44	11	3	10	8	8	0	0	0	0	40
	27,076	42,339	59,089	70,035	69,622	0	0	0	0	53,325
45-49	3	7	9	5	0	7	1	0	0	32
	27,287	32,268	44,495	64,548	0	58,195	73,166	0	0	47,233
50-54	3	5	10	12	3	7	6	2	0	48
	20,326	29,709	32,823	45,376	60,559	69,049	107,579	82,014	0	53,266
55-59	0	2	9	10	9	2	5	7	1	45
	0	46,560	38,183	41,803	40,433	51,283	82,347	69,046	56,595	50,509
60-64	0	1	3	5	1	7	2	1	0	20
	0	33,169	37,552	47,401	65,004	54,506	92,044	80,749	0	54,711
65-69	1	2	0	2	3	0	0	0	0	8
	19,793	20,986	0	22,403	58,371	0	0	0	0	35,210
70+	0	1	1	0	0	0	0	0	0	2
	0	19,531	30,786	0	0	0	0	0	0	25,158
Total Employees	55	35	47	43	24	23	14	10	1	252
Average Salary	34,169	38,213	45,039	50,776	55,944	59,775	93,890	72,810	56,595	48,943

Retiree Distribution as of January 1, 2014

0 0 0 0 0 0 0	Total 0 0 0 0 0 0 1 1	Male 0 0 0 0 0 0 0 18,999	Female 0 0 0 0 0 4,449	Total 0 0 0 0 0 0 0 4,449	
0 0 0 0 0 1	0 0 0 0 0 1	0 0 0 0 0	0 0 0 0 0 4,449	0 0 0 0	
0 0 0 0 1	0 0 0 0 1 1	0 0 0 0	0 0 0 0 4,449	0 0 0 0	
0 0 0 1 0	0 0 0 1 1	0 0 0 0	0 0 0 4,449	0 0 0	
0 0 1 0	0 0 1 1	0 0 0	0 0 4,449	0	
0 1 0	0 1 1	0 0	0 4,449	0	
1 0	1 1	0	4,449		
0	1			4.449	
		18,999	^		
			0	18,999	
11	17	351,318	98,977	450,295	
22	45	887,747	379,657	1,267,404	
17	30	432,523	217,579	650,102	
24	36	331,270	326,186	657,456	
17	26	169,530	212,599	382,129	
16	22	101,509	259,143	360,653	
22	25	27,111	243,296	270,408	
9	12	18,375	43,969	62,344	
1	2	3,541	4,536	8,077	
140	217	2,341,924	1,790,391	4,132,314	
74.47	73.07	30,415	12,789	19,043	
	100	56.7	43.3	100	
		74.47 73.07	74.47 73.07 30,415	74.47 73.07 30,415 12,789	74.47 73.07 30,415 12,789 19,043

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Disabled Retiree Distribution as of January 1, 2014

	Number of Employees		Total I				
Attained Age	Male	Female	Total	Male	Female	Total	
< 20	0	0	0	0	0	0	
20-24	0	0	0	0	0	0	
25-29	0	0	0	0	0	0	
30-34	0	0	0	0	0	0	
35-39	0	0	0	0	0	0	
40-44	0	0	0	0	0	0	
45-49	1	0	1	45,248	0	45,248	
50-54	0	0	0	0	0	0	
55-59	4	1	5	151,678	33,738	185,416	
60-64	1	1	2	38,548	6,707	45,255	
65-69	3	0	3	119,788	0	119,788	
70-74	1	0	1	13,096	0	13,096	
75-79	2	1	3	60,282	5,805	66,087	
80-84	0	0	0	0	0	0	
85-89	1	0	1	19,098	0	19,098	
90-94	0	0	0	0	0	0	
95-99	0	0	0	0	0	0	
Total	13	3	16	447,739	46,250	493,989	
Average (Age/Payment)	65.55	65.48	65.54	34,441	15,417	30,874	
Frequency Percent	81.3	18.8	100	90.6	9.4	100	

EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2014	\$5,825,641	\$1,053,952	\$3,423,564	\$3,353,172	\$2,005,047
2015	5,213,436	1,107,011	3,525,137	3,567,994	2,986,706
2016	5,523,647	1,162,628	3,655,691	3,804,098	3,098,770
2017	5,882,386	1,220,924	3,791,057	4,047,601	3,177,195
2018	6,233,048	1,282,023	3,931,410	4,298,025	3,278,410
2019	6,518,647	1,346,056	4,076,934	4,559,560	3,463,902
2020	6,814,872	1,413,161	4,130,538	4,833,821	3,562,648
2021	7,170,727	1,483,480	4,282,737	5,116,143	3,711,633
2022	7,503,872	1,557,164	4,440,511	5,411,820	3,905,623
2023	7,813,707	1,634,369	4,604,062	5,724,595	4,149,320
2024	8,110,915	1,715,259	4,773,601	6,058,147	4,436,092
2025	8,438,337	1,800,005	4,558,990	6,405,146	4,325,804
2026	8,786,143	1,888,787	4,723,601	6,751,142	4,577,388
2027	9,140,822	1,981,791	4,894,086	7,117,782	4,852,837
2028	9,509,819	2,079,213	5,070,651	7,506,742	5,146,787
2029	9,893,712	2,181,258	5,253,512	7,919,533	5,460,591
2030	10,293,102	2,288,140	5,442,888	8,357,779	5,795,704
2031	10,708,615	2,400,083	5,639,008	8,823,221	6,153,697
2032	11,140,901	2,517,320	5,842,110	9,317,729	6,536,258
2033	11,590,638	2,640,096	6,052,437	9,843,315	6,945,210
2034	12,058,529	2,768,666	6,270,244	10,402,137	7,382,517
2035	12,545,309	2,903,298	667,011	10,860,023	1,885,023
2036	13,051,739	3,044,270	667,418	10,994,861	1,654,810
2037	13,578,612	3,191,875	666,790	11,109,928	1,389,981
2038	14,126,754	3,319,550	693,462	11,200,791	1,087,049
2039	14,697,024	3,452,332	721,200	11,265,702	742,210
2040	15,290,314	3,590,425	750,048	11,301,163	351,322
2041	15,907,555	3,734,042	780,050	11,303,337	(90,126)
2042	16,549,712	3,883,404	811,252	11,268,010	(587,046)
2043	17,043,761	4,038,740	843,702	11,197,598	(963,721)

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2014, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees of the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting. The system has 2 participating employers.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

Chapter 176 of the Acts of 2011 created different plan provisions within these groups for those hired on or after April 2, 2012.

3. Salary

Salary is defined as gross regular compensation. Salary <u>does not</u> include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. Member Contributions

Member contributions vary depending upon date hired as follows:

Member					
Date of Hire	Contribution Rate				
Prior to 1975	5.0% of Salary				
1975 to 1983	7.0% of Salary				
1984 to 1996	8.0% of Salary				
1996 and Later plus	9.0% of Salary				
1979 and Later	2.0% of Salary in excess of \$30	0,000			

For Group 1 employees who become members on or after April 2, 2012, the Contribution Rate shall be 6% after the completion of 30 years of service.

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.). For employees who become members on or after April 2, 2012, the averaging period shall be five years.

6. <u>Creditable Service</u>

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirement

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

- (i) completion of 20 years of service
- (ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service
- (iv) for a Group 1 employee hired on or after April 2, 2012, attainment of age 60 and completion of ten years of service

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table for those hired prior to April 2, 2012:

Age at	Perce	ntage of Average	Salary
<u>Retirement</u>	Group 1	Group 2	Group 4
	0.4.7	0.4.7	0.0.7
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
31	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.002
71	.001	.001	.001

For those hired after April 1, 2012 who retire with less than 30 years of service, the following rates are applied:

Age at	Percer	ntage of Average	Salary
Retirement	Group 1	Group 2	Group 4
67 or Over	.0250	.0250	.0250
66	.0235	.0250	.0250
65	.0220	.0250	.0250
64	.0205	.0250	.0250
63	.0190	.0250	.0250
62	.0175	.0250	.0250
61	.0160	.0235	.0250
60	.0145	.0220	.0250
59		.0205	.0250
58		.0190	.0250
57		.0175	.0250
56		.0160	.0235
55		.0145	.0220
54			.0205
53			.0190
52			.0175
51			.0160
50			.0145

For those hired after April 1, 2012 who retire with at least 30 years of service, the following rates are applied:

Age at	t Percentage of Average Salary									
Retirement	Group 1	Group 2	Group 4							
67 or Over	.02500	.02500	.02500							
66	.02375	.02500	.02500							
65	.02250	.02500	.02500							
64	.02125	.02500	.02500							
63	.02000	.02500	.02500							
62	.01875	.02500	.02500							
61	.01750	.02375	.02500							
60	.01625	.02250	.02500							
59		.02125	.02500							
58		.02000	.02500							
57		.01875	.02500							
56		.01750	.02375							
55		.01625	.02250							
54			.02125							
53			.02000							
52			.01875							
51			.01750							
50			.01625							

8. <u>Deferred Vested Retirement</u>

a. <u>Eligibility</u>:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55 or age 60 if hired on or after April 2, 2012).

b. <u>Benefit Amount</u>:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55 (age 60 if hired on or after April 2, 2012). If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55 (age 60 if hired on or after April 2, 2012), he

will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits

a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. <u>Cost-of-Living Increases</u>

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A Life annuity
- (ii) Option B Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

January 1, 2014.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.25% per annum, net of investment expenses.

5. Salary Scale

It is assumed that salaries including longevity will increase at a rate of 4.0% per year.

6. <u>Cost-of-Living Increases</u>

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and \$12,000 per year.

7. <u>Value of Investments</u>

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC). The actuarial value of assets is

determined using a five-year smoothing of asset returns greater than or less than the assumed rate of return, with a 10% corridor.

8. Annual Rate of Withdrawal Prior to Retirement

Based on the 2002 PERAC Experience Study, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	General <u>Employees</u>	Police and Fire Employees
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 Mortality Table for males and females, adjusted to 2015 with Scale AA. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members.

10. Service Retirement

Based on the 2002 PERAC Experience Study, the assumed annual retirement rates are illustrated at the following ages for those hired prior to April 2, 2012:

	Male General	Female General	Male and Female Police and Fire
<u>Age</u>	Employees	Employees	Employees
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages for those hired on or after April 2, 2012:

	Male General	Female General	Male and Female Police and Fire
Age	Employees	Employees	Employees
50	0.0000	0.0000	0.0100
51	0.0000	0.0000	0.0100
52	0.0000	0.0000	0.0200
53	0.0000	0.0000	0.0200
54	0.0000	0.0000	0.0200
55	0.0000	0.0000	0.0500
56	0.0000	0.0000	0.0750
57	0.0000	0.0000	0.1500
58	0.0000	0.0000	0.1000
59	0.0000	0.0000	0.1000
60	0.0500	0.0650	0.1000
61	0.0650	0.0650	0.1500
62	0.2000	0.1500	0.2000
63	0.2000	0.1300	0.2000
64	0.3000	0.1500	0.3000
65	0.2500	0.1250	1.0000
66	0.2200	0.1800	1.0000
67	0.4000	0.2500	1.0000
68	0.3000	0.2000	1.0000
69	0.3000	0.2000	1.0000
70	1.0000	1.0000	1.0000

12. Annual Rate of Disability Prior to Retirement

Based on the 2002 PERAC Experience Study, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained <u>Age</u>	General <u>Employees</u>	Police and Fire Employees					
20	0.0001	0.0010					
30	0.0003	0.0030					
40	0.0010	0.0030					
50	0.0019	0.0125					

In addition, it is assumed for the general employees that 50% of all disabilities are ordinary (50% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

13. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

14. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2015 is \$120,000 and is anticipated to increase at 4% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of projected plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. <u>Actuarial Assumptions</u>

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of projected pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. <u>Unfunded Actuarial Accrued Liability</u>

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Actuarial Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the Amesbury Retirement System contributing as of January 1, 2014, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience.. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC

Daniel W. Therman

Daniel W. Sherman, ASA, MAAA Enrolled Actuary No. 11-4086

April, 2014

BREAKOUTS

Breakouts - Payroll Based

	<u>Total</u>	All Others	Housing	<u>School</u>	<u>Sewer</u>	Water
(1) Participants						
(a) Actives	252	122	8	104	6	12
(b) Inactives	63	57	0	1	2	3
(c) Retirees	217	127	5	79	2	4
(d) Disabled Retirees	<u>16</u>	<u>15</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
(e) Total	548	321	14	184	10	19
(2) Payroll of Active Participants	\$ 12,333,598	\$ 7,789,461	\$ 422,368	\$ 3,074,657	\$ 340,422	\$ 706,690
(3) Percentage of Payroll	100.00%	63.16%	3.42%	24.93%	2.76%	5.73%
(4) Fiscal 2014 Cost						
(a) ERI	\$ 298,614	\$ 286,464	\$ -	\$ 12,150	\$ -	\$ -
(b) Remaining Amortizations*	2,419,937	1,528,346	82,872	603,269	66,793	138,657
(c) Employer Normal Cost*	376,854	238,008	12,905	93,946	10,402	21,593
(d) Administrative Expenses*	120,000	<u>75,788</u>	4,109	29,915	<u>3,312</u>	<u>6,876</u>
(e) Total	\$ 3,215,405	\$ 2,128,606	\$ 99,886	\$ 739,280	\$ 80,507	\$ 167,126
(5) Fiscal 2015 Cost	\$ 3,423,564	\$ 2,223,935	\$ 105,973	\$ 768,589	\$ 124,930	\$ 200,137
(6) Fiscal 2016 Cost	\$ 3,525,137	\$ 2,333,649	\$ 109,508	\$ 810,493	\$ 88,262	\$ 183,225
(7) Fiscal 2017 Cost	\$ 3,655,691	\$ 2,420,076	\$ 113,563	\$ 840,510	\$ 91,531	\$ 190,011
(8) Percentage of Total Cost	100.00%	66.20%	3.11%	22.99%	2.50%	5.20%

^{*}Appropriations are allocated based on the ratio of the division payroll to the total payroll.

Breakouts - Actuarial Based

	<u>Total</u>			All Others		<u>Housing</u>	School		<u>Sewer</u>		Water		
(1) Participants													
(a) Actives				122		8		104		6		12	
(b) Inactives		207		201		0		1		2		3	
(c) Retirees	217			127 5			79			2		4	
(d) Disabled Retirees		<u>16</u>		<u>15</u>			<u>1</u> <u>0</u>			<u>0</u>	<u>0</u>		
(e) Total		548		321		14		184	10	19			
(2) Payroll of Active Participants	\$	12,333,598	\$	7,789,461	\$	422,368	\$	3,074,657	\$	340,422	\$	706,690	
(3) Normal Cost													
(a) Total Normal Cost	\$	1,550,806	\$	1,096,122	\$	44,500	\$	330,814	\$	24,660	\$	54,710	
(b) Expected Employee Contributions		1,053,952		680,863		34,658		251,460		28,031		58,940	
(c) Administrative Expenses		120,000		<u>84,818</u>		<u>3,443</u>		<u>25,598</u>		<u>1,908</u>		<u>4,233</u>	
(d) Net Employer Normal Cost (a) - (b)	\$	496,854	\$	415,259	\$	9,842	\$	79,354	\$	(3,371)	\$	(4,230)	
(4) Actuarial Accrued Liability	\$	80,863,302	\$	57,224,586	\$	2,595,679	\$	16,159,510	\$	1,664,357	\$	3,219,170	
(5) Assets*		43,305,292		30,645,883		1,390,082		<u>8,654,016</u>		<u>891,325</u>		1,723,985	
(6) Unfunded Actuarial Accrued Liability (4) - (5)	\$	37,558,010	\$	26,578,702	\$	1,205,597	\$	7,505,494	\$	773,032	\$	1,495,185	
(7) ERI	\$	298,614	\$	286,464	\$	-	\$	12,150	\$	-	\$	-	
(8) Remaining Amortizations*		2,419,937	_	1,712,516		77,679	_	483,594		49,808		96,338	
(9) Total Amortizations	\$	2,718,551	\$	1,998,980	\$	77,679	\$	495,744	\$	49,808	\$	96,338	
(10) Fiscal 2014 Cost (3d) + (9)	\$	3,215,405	\$	2,414,241	\$	87,521	\$	575,098	\$	46,437	\$	92,108	
(11) Fiscal 2015 Cost	\$	3,423,564	\$	2,598,630	\$	90,118	\$	592,160	\$	47,815	\$	94,841	
Percentage of Total Cost		100.0%		75.9%		2.6%		17.3%		1.4%		2.8%	
(12) Fiscal 2016 Cost	\$	3,525,137	\$	2,675,727	\$	92,792	\$	609,729	\$	49,234	\$	97,655	
Percentage of Total Cost		100.0%		75.9%		2.6%		17.3%		1.4%		2.8%	
(13) Fiscal 2017 Cost	\$	3,655,691	\$	2,774,825	\$	96,228	\$	632,310	\$	51,057	\$	101,271	
Percentage of Total Cost		100.0%		75.9%		2.6%		17.3%		1.4%		2.8%	

^{*} Allocation is based on the ratio of the Unfunded Actuarial Accrued Liability